VOL. 559, NOS. 1+2 JOURNAL OF CHROMATOGRAPHY OCTOBER 18, 1991

CONTENTS

3rd INTERNATIONAL SYMPOSIUM ON HIGH PERFORMANCE CAPILLARY ELECTROPHORESIS, SAN DIEGO, CA, FEBRUARY 3–6, 1991

Foreword
by J. W. Jorgenson (Chapel Hill, NC, USA) 1

Mathematical model describing dispersion in free solution capillary electrophoresis under stacking conditions
by A. Vinther (Gentofte, Denmark) and H. Søeberg (Lyngby, Denmark) 3

Temperature elevations of the sample zone in free solution capillary electrophoresis under stacking conditions
by A. Vinther (Gentofte, Denmark) and H. Søeberg (Lyngby, Denmark) 27

Factors influencing the resolution and quantitation of oligonucleotides separated by capillary electrophoresis on a gel-filled capillary
by D. Demorest and R. Dubrow (San Jose, CA, USA) 43

Influence of operating parameters on reproducibility in capillary electrophoresis
by S. C. Smith, J. K. Strasters and M. G. Khaledi (Raleigh, NC, USA) 57

Evaluation of fundamental properties of a silica capillary used for capillary electrophoresis
by K. Salomon, D. S. Burgi and J. C. Helmer (Palo Alto, CA, USA) 69

Effect of hydrostatic flow on the efficiency in capillary electrophoresis
by E. Grushka (Jerusalem, Israel) 81

Field effect electroosmosis
by K. Ghowsi (Lubbock, TX, USA) and R. J. Gale (Baton Rouge, LA, USA) 95

Split injector for capillary zone electrophoresis
by T. Tsuda and R. N. Zare (Stanford, CA, USA) 103

Moving boundary capillary electrophoresis with concentration gradient detection
by J. Pawliszyn and J. Wu (Waterloo, Canada) 111

Capillary zone electrophoresis analysis of acrylamido buffers for isoelectric focusing in immobilized pH gradients
by M. Chiari, C. Ettori and P. G. Righetti (Milan, Italy) 119

Analysis of separation efficiency in capillary electrophoresis with direct control of electroosmosis by using an external electric field
by C. S. Lee, C.-T. Wu, T. Lopes and B. Patel (Baltimore, MD, USA) 133

Field amplified sample injection in high-performance capillary electrophoresis
by R.-L. Chien and D. S. Burgi (Palo Alto, CA, USA) 141

Field-amplified polarity-switching sample injection in high-performance capillary electrophoresis
by R.-L. Chien and D. S. Burgi (Palo Alto, CA, USA) 153

Optimization and evaluation of the performance of arrangements for UV detection in high-resolution separations using fused-silica capillaries
by G. J. M. Bruin, G. Stegeman, A. C. van Asten, X. Xu, J. C. Kraak and H. Poppe (Amsterdam, Netherlands) 163

Laser-induced fluorescence and fluorescence microscopy for capillary electrophoresis zone detection
by L. Hernandez, J. Escalona, N. Joshi (Merida, Venezuela) and N. Guzman (Princeton, NJ, USA) 183

Instrumentation for high-performance capillary electrophoresis–mass spectrometry
by R. D. Smith, H. R. Udseth, C. J. Barinaga and C. G. Edmonds (Richland, WA, USA) 197

Chiral separations by micellar electrokinetic chromatography with sodium N-dodecanoyl-L-valinate
by K. Otsuka, J. Kawahara and K. Tatekawa (Osaka, Japan) and S. Terabe (Hyogo, Japan) 209

Selected applications of cyclodextrin selectors in capillary electrophoresis
by J. Snopek, H. Soini and M. Novotny (Bloomington, IN, USA) and E. Smolkova-Keulemansova and I. Jelinek (Prague, Czechoslovakia) 215

Separation of fluorescent oligosaccharide derivatives by microcolumn techniques based on electrophoresis and liquid chromatography
by J. Liu, O. Shirota and M. Novotny (Bloomington, IN, USA) 223

Low-cost, high-sensitivity laser-induced fluorescence detection for DNA sequencing by capillary gel electrophoresis
by D. Y. Chen, H. P. Swerdlow, H. R. Harke, J. Z. Zhang and N. J. Dovichi (Edmonton, Canada) 237

Reproducibility and quantitation of separation for ribonucleoside triphosphates and deoxyribonucleoside triphosphates by capillary zone electrophoresis
by R. Takigiku and R. E. Schneider (Cincinnati, OH, USA) 247

Capillary electrophoresis of DNA in entangled polymer solutions
by P. D. Grossman and D. S. Soane (Berkeley, CA, USA) 257

Analysis of DNA restriction fragments and polymerase chain reaction products towards detection of the AIDS (HIV-1) virus in blood
by H. E. Schwartz and K. Ulfelder (Palo Alto, CA, USA) and F. J. Sunzeri, M. P. Busch and R. G. Brownlee (San Francisco, CA, USA) 267

Effect of temperature on the separation of DNA restriction fragments in capillary gel electrophoresis
by A. Guttman and N. Cooke (Palo Alto, CA, USA) 285

Identification of DNA molecules by pre-column hybridization using capillary electrophoresis
by J. W. Chen, A. S. Cohen and B. L. Karger (Boston, MA, USA) 295

Assessment of capillary electrophoresis in pharmaceutical applications. Analysis and quantification of a recombinant cytokine in an injectable dosage form
by N. A. Guzman, H. Ali, J. Moschera, K. Iqbal and A. W. Malick (Nutley, NJ, USA) . 307

Free solution capillary electrophoresis of proteins using untreated fused-silica capillaries
by K.-J. Lee and G. S. Heo (Daejonsi Daeduk Science Town, South Korea) 317

Detection of enzyme activity in fractions collected from free solution capillary electrophoresis of complex samples
by N. Banke, K. Hansen and I. Diers (Bagsvaerd, Denmark) 325

Analysis of vaccine purification process by capillary electrophoresis
by W. M. Hurni and W. J. Miller (West Point, PA, USA) 337

Application of high-performance capillary electrophoresis to the analysis of conformation and interaction of metal-binding proteins
by H. Kajiwara (Ibaraki, Japan) 345

Electrophoretic mobility modeling of proteins in free zone capillary electrophoresis and its application to monoclonal antibody microheterogeneity analysis
by B. J. Compton (Syracuse, NY, USA) 357

Capillary zone electrophoresis of proteins with hydrophilic fused-silica capillaries
by W. Nashabeh and Z. El Rassi (Stillwater, OK, USA) 367

High-performance capillary electrophoresis as a fast in-process control method for enzyme-labelled monoclonal antibody conjugates
by S. J. Harrington, R. Varro and T. M. Li (Palo Alto, CA, USA) 385

Capillary zone electrophoresis studies of motilin peptides. Effects of charge, hydrophobicity, secondary structure and length
by J. R. Florance, Z. D. Konteatis, M. J. Macielag, R. A. Lessor and A. Galdes (Murray Hill, NJ, USA) 391

Fractionation of the human recombinant tissue plasminogen activator (rtPA) glycoforms by high-performance capillary zone electrophoresis and capillary isoelectric focusing
by K. W. Yim (San Francisco, CA, USA) 401

High-performance capillary electrophoresis of proteins from the fluid lining of the lungs of rats exposed to perfluoroisobutylene
by L. R. Gurley, J. S. Buchanan, J. E. London, D. M. Stavert and B. E. Lehnert (Los Alamos, NM, USA) 411

High-performance capillary electrophoresis of histones
by L. R. Gurley, J. E. London and J. G. Valdez (Los Alamos, NM, USA) 431

Rapid protein analysis by capillary electrophoresis
by F.-T. A. Chen (Fullerton, CA, USA) 445

Capillary electrophoresis for diagnosis and studies of human disease, particularly metabolic disorders
by E. Jellum, A. K. Thorsrud and E. Time (Oslo, Norway) 455

Characterization of polyethylene glycol modified proteins using charge-reversed capillary electrophoresis
by R. L. Cunico, V. Gruhn, L. Kresin and D. E. Nitecki (Emeryville, CA, USA) and J. E. Wiktorowicz (San Jose, CA, USA) 467

Optimizing separation parameters in capillary isoelectric focusing
by M. Zhu, R. Rodriguez and T. Wehr (Richmond, CA, USA) 479

Capillary isotachophoresis with concentration-gradient detection. An application to the separation of synthetic peptides
by T. McDonnell and J. Pawliszyn (Waterloo, Canada) 489

Isotachophoretic analysis of flavonoids and phenolcarboxylic acids of relevance to phytopharmaceutical industry
by U. Seitz, G. Bonn and P. Oefner (Innsbruck, Austria) and M. Popp (Neumarkt, Germany) 499

Determination of thiopental in human serum and plasma by high-performance capillary electrophoresis–micellar electrokinetic chromatography
by P. Meier and W. Thormann (Bern, Switzerland) 505

Determination of small drug molecules by capillary electrophoresis–atmospheric pressure ionization mass spectrometry
by I. M. Johansson, R. Pavelka and J. D. Henion (Ithaca, NY, USA) 515

Migration behaviour of catechols and catecholamines in capillary electrophoresis
by C. P. Ong, S. F. Pang, S. P. Low, H. K. Lee and S. F. Y. Li (Singapore, Singapore) . 529

Separation of Dns-amino acids and vitamins by micellar electrokinetic chromatography
by C. P. Ong, C. L. Ng, H. K. Lee and S. F. Y. Li (Singapore, Singapore) 537

Electrochromatographic solid-phase extraction for determination of cimetidine in serum by micellar electrokinetic capillary chromatography
by H. Soini, T. Tsuda and M. V. Novotny (Bloomington, IN, USA) 547

Author Index 559

In articles with more than one author, the name of the author to whom correspondence should be addressed is indicated in the article heading by a 6-pointed asterisk (*)